

PATENT COOPERATION TREATY

PCT


REC'D 29 APR 2005

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference MULTI-021	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/BR 03/00172	International filing date (day/month/year) 21.11.2003	Priority date (day/month/year) 25.11.2002	
International Patent Classification (IPC) or national classification and IPC E05D7/02			
Applicant MULTIBR S S.A. ELETRODOM STICOS			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 15.04.2004		Date of completion of this report 02.05.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Mund, A Telephone No. +31 70 340-2524	



**INTERNATIONAL PRELIMINARY REPORT
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International application No.
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-8 as originally filed

Claims, Numbers

2-15 as originally filed

1 received on 10.03.2005 with letter of 10.03.2005

Drawings, Sheets

1/4-4/4 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6-10
	No: Claims	1-5, 11-15
Inventive step (IS)	Yes: Claims	6-10
	No: Claims	1-5, 11-15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1.1. Reference is made to the following documents:

D1: US-A-4 932 729 (THOMPSON T R ET AL) 12 June 1990 (1990-06-12)

D2: US-A-5 215 367 (ALLISON MATTHEW W ET AL) 1 June 1993 (1993-06-01)

D3: DE 102 21 895 A (BSH BOSCH SIEMENS HAUSGERÄTE) 27 November 2003
(2003-11-27)

D4: EP 0 825 400 A (LIEBHERR-HAUSGERÄTE) 25 February 1998 (1998-02-25)

1.2. The document D4 was not cited in the international search report.

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Art. 33(2) PCT.

2.1. Since the wording "...a hinge body (20) incorporating a front portion (20a) and a rear portion (20b),..." in claim 1 does not exclude the possibility of the hinge body being made from separable parts/portions, it is possible to consider the parts (44), (54), and (81) from D1 to be the hinge body of D1. Consequently, the document D1 is considered to be the closest prior art and discloses (the references in parentheses applying to this document):

A hinge arrangement for the front door of a cabinet (10,12) having a lower front edge (22), said hinge arrangement comprising a hinge body (44,54,81), affixed to the lower front edge (22) of a cabinet (10,12), carrying an upwardly projecting hinge pin (98), when mounted maintaining a certain spacing from the lower front edge (22) of the cabinet (10,12), around which the front door is inferiorly journaled; a shoe (72) inferiorly mounted to the hinge body (44,54,81) according to a vertical axis and maintaining said certain spacing from the lower front edge (22) of the cabinet (10,12), said shoe (72) being selectively manually displaced along said vertical axis between an inoperative position, in which it is operatively spaced from the floor that supports the cabinet (10,12), and an operative position, in which it is seated on the floor, in order to transfer to the latter the weight of the front door and to lock the cabinet (10,12) against displacements on the floor.

2.2. Similarly, document D4 (e.g.: hinge body (6), hinge pin (21), shoe (31)) is also novelty destroying for claim 1 (Art. 33(2) PCT).

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3. Dependent claims 2-5 and 11-15 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty (Art. 33(2) PCT) and/or inventive step (Art. 33(3) PCT), see documents D4 as well as D1-D3 and the corresponding passages cited in the search report.
4. The combination of the features of dependent claims 6-10 is neither known from, nor rendered obvious by, the available prior art.

CLAIMS

1. A hinge arrangement for the front door of a cabinet (10) having a lower front edge (11), characterized in that it comprises a hinge body (20) incorporating a front portion (20a) and a rear portion (20b), affixed to the lower front edge (11) of the cabinet (10) and carrying an upwardly projecting hinge pin (30), maintaining a certain spacing from the lower front edge (11) of the cabinet (10) and around which the front door is inferiorly journaled; a shoe (40) inferiorly mounted to the hinge body (20) according to a vertical axis, maintaining said certain spacing from the lower front edge (11) of the cabinet (10), said shoe (40) being selectively manually displaced towards said axis between an inoperative position, in which it is operatively spaced from the floor (P) that supports the cabinet (10), and an operative position, in which it is seated on the floor (P), in order to transfer to the latter the weight of the front door and to lock the cabinet (10) against displacements on the floor (P).
2. The hinge arrangement as set forth in claim 1, characterized in that the hinge pin (30) presents a lower portion (31), to be removably affixed into a corresponding bore (26) provided in the hinge body (20), and an upper portion (32), projecting upwardly in relation to the latter.
3. The hinge arrangement as set forth in claim 2, characterized in that the hinge pin (30) incorporates a median flange (33) to be seated on the hinge body (20) so as to define an axial bearing to support, inferiorly, the front door.
4. The hinge arrangement as set forth in claim 2, characterized in that the shoe (40) is coupled to a shoe pin (41) that is removably affixed into a

corresponding bore (26) provided in the hinge body (20).

5 5. The hinge arrangement as set forth in claim 4, characterized in that the hinge pin (30) has its lower portion (31) rotatably locked in the hinge body (20) when fitted inside the respective bore (26) of the latter.

10 6. The hinge arrangement as set forth in claim 5, characterized in that the bore (26) of the hinge body (20) presents a lower portion (26a) of smaller diameter, and an upper portion (26b) of larger diameter and with a non-circular cross section.

15 7. The hinge arrangement as set forth in claim 6, characterized in that the lower portion (31) of the hinge pin (30) incorporates an enlargement (34) which is fitted and locked against rotation inside the upper portion (26b) of the bore (26) of the hinge body (20), while the lower portion (31) is fitted with a small gap inside the lower portion (26a) of the bore (26) of the hinge body (20).

20 8. The hinge arrangement as set forth in claim 6, characterized in that the lower portion (26a) of the bore (26) of the hinge body (20) is threaded along at least part of its longitudinal extension.

25 9. The hinge arrangement as set forth in claim 8, characterized in that the shoe pin (41) is provided with an external thread to be threaded inside the lower portion (26a) of a respective bore (26) of the hinge body (20).

30 10. The hinge arrangement as set forth in claim 9, characterized in that the bores (26) for the fixation of the hinge pin (30) and the shoe pin (41) are identical and disposed side by side, with their axes lying on a plane that is parallel to the lower front
35 edge (11) of the cabinet (10).

11. The hinge arrangement as set forth in claim 1, characterized in that the hinge body (20) incorporates, medianly, an upper flange (21) disposed between a front portion (20a) and a rear portion (20b) of the hinge body (20), said upper flange (21) and rear portion (20b) being respectively seated and affixed against the lower front edge (11) and under an adjacent lower wall portion (12) of the cabinet (10).
12. The hinge arrangement as set forth in claim 11, characterized in that the upper flange (21) and the rear portion (20b) of the hinge body (20) are provided with bores (22, 24) for the passage of respective front screws (23) and lower screws (25) to be threaded into respective bores (13, 15) provided in the lower front edge (11) and in the lower wall portion (12) of the cabinet (10).
13. The hinge arrangement as set forth in claim 11, characterized in that the hinge body (20) further carries, inferiorly, a roller (70) for displacing the cabinet (10) on the floor (P).
14. The hinge arrangement as set forth in claim 12, characterized in that the roller (70) is journaled in a lower projection (28) of the rear extension (20b) of the hinge body (20).
15. The hinge arrangement as set forth in any one of the claims 1-14, characterized in that it comprises two hinge bodies (20) secured to the lower front edge (11) of the cabinet (10), one of said hinge bodies (20) carrying, inferiorly, a shoe (40) and being affixed close to the end of the lower front edge (11) turned to the opening side of the front door, and the other hinge body (20) carrying, inferiorly, a shoe (40) and, superiorly, a hinge pin (30) and being affixed to the end of the lower front door (11) turned to the hinge side of the front door.